MP89 DOUBLE METALLIZED POLYPROPYLENE

STK ELECTRONICS Film Capacitors

HIGH PEAK CURRENT CARRYING CAPABILITY (dV/dt) 600-3000VDC

DESCRIPTION:

MP89 round, axial film capacitors use polypropylene film and dual metallized electrodes for both self-healing properties and high peak current carrying capability (dV/dt).

This series features low ESR characteristics, and excellent high frequency and high voltage capabilities.

APPLICATIONS:

Suitable for high current, high frequency and high pulse applications.

Snubber circuits

High dV/dt

Consult factory for: Humidity resistance, Dry heat resistance, Cold resistance, Vibration resistance, Solderability, Load life test date.

SPECIFICATIONS:

Voltage range: 600~3000VDC
(VAC ratings: see data sheet)

Capacitance Range: 0.01~4.7µf

Capacitance Tolerance: ±10%

Operating Temperature Range: -55°C to 105°C
Linear derate by 50% above 85°

Withstand Voltage: 160% of the rated voltage for 60 sec.

Dielectric Strength: 175% of the rated voltage for 1-5 sec.

Dissipation Factor: 0.1% max at 1 KHz 25°C

Insulation Resistance: I.R.≥ 30,000MΩ (C≤0.33µf)
I.R.≥ 10,000MΩ (C>0.33µf)

I.p.k. and I_{RMS} are rated @ 60°C

dV/dt, ESR: See dimensional tables

Temperature Coefficient: -200ppm ± 100ppm

Cap.	L Inches (mm)	D Inches (mm)	d Inches (mm)	Typical ESR milliohms	Typical ESL nH	dV/dt V/us	I peak A	I RMS A
			600VDC (275VAC)					
0.10	1.339 (34.0)	.354 (9.0)	.032 (.8)	28	19	196	20	2.5
0.15	1.339 (34.0)	.413 (10.5)	.040 (1.0)	13	20	196	29	4.0
0.22	1.339 (34.0)	.453 (11.5)	.040 (1.0)	12	20	196	43	4.4
0.33	1.339 (34.0)	.531 (13.5)	.040 (1.0)	9	21	196	65	5.6
0.47	1.339 (34.0)	.610 (15.5)	.040 (1.0)	7	22	196	92	6.9
0.68	1.339 (34.0)	.709 (18.0)	.040 (1.0)	6	23	196	134	8.1
1.00	1.339 (34.0)	.827 (21.0)	.040 (1.0)	6	24	196	196	8.9
1.50	1.339 (34.0)	.984 (25.0)	.047 (1.2)	5	26	196	295	10.9
2.00	1.811 (46.0)	.925 (23.5)	.047 (1.2)	5	31	128	255	11.8
3.30	2.126 (54.0)	1.063 (27.0)	.047 (1.2)	4	36	105	346	15.3
4.70	2.126 (54.0)	1.240 (31.5)	.047 (1.2)	4	38	105	492	16.8
			850VDC (450VAC)					
0.15	1.339 (34.0)	.512 (13.0)	.040 (1.0)	8	21	713	107	5.8
0.22	1.339 (34.0)	.610 (15.5)	.040 (1.0)	8	22	713	157	6.4
0.33	1.339 (34.0)	.709 (18.0)	.040 (1.0)	7	23	713	235	7.5
0.47	1.339 (34.0)	.827 (21.0)	.040 (1.0)	5	24	713	335	9.8
0.68	1.339 (34.0)	.965 (24.5)	.047 (1.2)	4	26	713	485	12.0
1.00	1.811 (46.0)	.886 (22.5)	.047 (1.2)	5	30	400	400	11.5
1.50	1.811 (46.0)	1.063 (27.0)	.047 (1.2)	4	32	400	600	14.3
2.00	1.811 (46.0)	1.201 (30.5)	.047 (1.2)	3	34	400	800	17.9
2.20	1.811 (46.0)	1.260 (32.0)	.047 (1.2)	3	34	400	880	18.4
2.50	1.811 (46.0)	1.339 (34.0)	.047 (1.2)	3	35	400	1000	19.1

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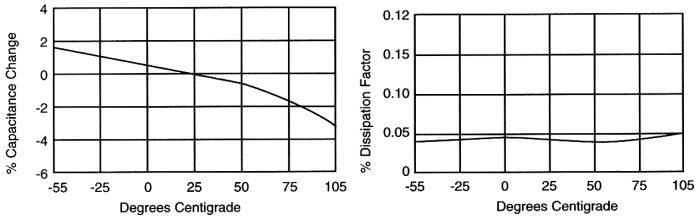
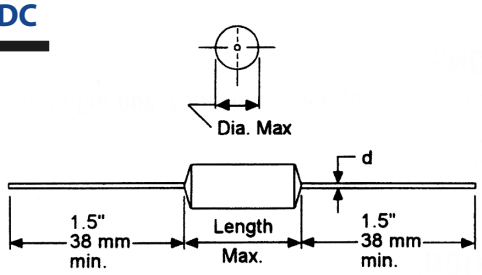
HIGH PEAK CURRENT CARRYING CAPABILITY (dV/dt) 600-3000VDC

Typical Characteristics





Cap.	L Inches (mm)	D Inches (mm)	d Inches (mm)	Typical ESR milliohms	Typical ESL nH	dV/dt V/us	I peak A	I RMS A
			1000VDC (500VAC					
.150	1.339 (34.0)	.591 (15.0)	.040 (1.0)	7	22	856	128	6.7
.220	1.339 (34.0)	.689 (17.5)	.040 (1.0)	7	23	856	188	7.4
.330	1.339 (34.0)	.807 (20.5)	.040 (1.0)	6	24	856	283	8.8
.470	1.339 (34.0)	.945 (24.0)	.047 (1.2)	5	26	856	402	10.6
.680	1.339 (34.0)	1.102 (28.0)	.047 (1.2)	5	27	856	582	11.7
1.000	1.811 (46.0)	1.024 (26.0)	.047 (1.2)	5	32	480	480	12.5
1.500	1.811 (46.0)	1.220 (31.0)	.047 (1.2)	4	34	480	720	15.6
2.000	1.811 (46.0)	1.398 (35.5)	.047 (1.2)	3	36	480	960	19.6
			1200VDC (500VAC)					
.100	1.339 (34.0)	.610 (15.5)	.040 (1.0)	9	22	1142	114	6.1
.150	1.339 (34.0)	.728 (18.5)	.040 (1.0)	7	23	1142	171	7.6
.220	1.339 (34.0)	.846 (21.5)	.040 (1.0)	7	24	1142	251	8.4
.330	1.811 (46.0)	.787 (20.0)	.040 (1.0)	7	29	640	211	9.0
.470	1.811 (46.0)	.906 (23.0)	.047 (1.2)	7	30	640	301	9.8
.680	1.811 (46.0)	1.063 (27.0)	.047 (1.2)	6	32	640	435	11.7 1
1.000	1.811 (46.0)	1.299 (33.0)	.047 (1.2)	5	35	640	640	14.5
1.500	2.126 (54.0)	1.378 (35.0)	.047 (1.2)	4	39	502	754	17.9
			1600VDC (630VAC)					
.100	1.339 (34.0)	.709 (18.0)	.040 (1.0)	7	23	1427	143	7.5
.150	1.339 (34.0)	.846 (21.5)	.040 (1.0)	5	24	1427	214	9.9
.220	1.339 (34.0)	1.004 (25.5)	.047 (1.2)	7	26	1427	314	9.3
.330	1.811 (46.0)	.925 (23.5)	.047 (1.2)	7	31	800	264	10.0
.470	1.811 (46.0)	1.083 (27.5)	.047 (1.2)	6	32	800	376	11.8
.680	1.811 (46.0)	1.280 (32.5)	.047 (1.2)	6	35	800	544	13.1
1.000	1.811 (46.0)	1.535 (39.0)	.047 (1.2)	5	37	800	800	16.2
1.500	2.126 (54.0)	1.654 (42.0)	.047 (1.2)	4	42	628	942	20.1
			2000VDC (630VAC)					
.022	1.339 (34.0)	.453 (11.5)	.040 (1.0)	35	6	1712	38	2.6
.033	1.339 (34.0)	.531 (13.5)	.040 (1.0)	20	21	1712	57	3.8
.047	1.339 (34.0)	.591 (15.0)	.040 (1.0)	12	22	1712	80	5.2
.068	1.339 (34.0)	.689 (17.5)	.040 (1.0)	8	23	1712	116	6.9
.100	1.339 (34.0)	.827 (21.0)	.040 (1.0)	7	24	1712	171	8.3
.150	1.811 (46.0)	.768 (19.5)	.040 (1.0)	7	29	960	144	8.9
.220	1.811 (46.0)	.866 (22.0)	.040 (1.0)	8	30	960	211	9.0
.330	1.811 (46.0)	1.063 (27.0)	.047 (1.2)	8	32	960	317	10.1
.470	1.811 (46.0)	1.260 (32.0)	.047 (1.2)	6	34	960	451	13.0
.560	2.126 (54.0)	1.220 (31.0)	.047 (1.2)	7	37	754	422	12.6
.680	2.126 (54.0)	1.339 (34.0)	.047 (1.2)	6	39	754	513	14.3
1.000	2.126 (54.0)	1.614 (41.0)	.047 (1.2)	5	42	754	754	17.7
			3000VDC (750VAC)					
.010	1.339 (34.0)	.453 (11.5)	.040 (1.0)	60	20	2568	26	2.0
.015	1.339 (34.0)	.531 (13.5)	.040 (1.0)	40	21	2568	39	2.7
.022	1.339 (34.0)	.610 (15.5)	.040 (1.0)	25	22	2568	57	3.6
.033	1.339 (34.0)	.709 (18.0)	.040 (1.0)	14	23	2568	85	5.3
.047	1.811 (46.0)	.650 (16.5)	.040 (1.0)	14	28	1440	68	5.7
.068	1.811 (46.0)	.748 (19.0)	.040 (1.0)	12	29	1440	98	6.7
.100	1.811 (46.0)	.886 (22.5)	.047 (1.2)	10	30	1440	144	8.1
.150	1.811 (46.0)	1.063 (27.0)	.047 (1.2)	8	32	1440	216	10.1

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